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Amendment Under 37 C.F.R. §1.111  
Application No. 10/540,486  
Attorney Docket No. 052523

**REMARKS**

Claims 1-4, 6, 7 and 9-20 are pending. Support for the changes to claim 1 may be found in the specification as originally filed, for example, in original claims 5 and 8. Support for new claim 17 may be found in the specification as originally filed, for example, in original claim 6 and paragraph [0095] (line 30 of page 22 to line 2 of page 23). Support for new claim 18 may be found in the specification as originally filed, for example, paragraph [0177] (Page 47, line 6 to 9). Support for new claims 19 and 20 may be found in the specification as originally filed, for example, in Examples 1 to 3. (See Table of page 57).

I. **The Rejections Based on Kume et al**

Claims 1, 10-13, and 15 are rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Kume et al (U.S. Patent Publication 2002/0231270).

Claim 2 is rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Kume et al in view of Sakamoto et al (U.S. Publication Number 2003/0125503).

Claims 3, 5-6, and 16 are rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Kume et al in view of Aida et al (U.S. Patent 5,093,739).

Claims 4 and 14 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kume et al and Aida et al in view of Kuwabara et al. (U.S. Patent Number 5,875,014).

Claim 7 is rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kume et al.

Claim 8 is rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Kume et al in view of Kaneko et al. (U.S. Patent Number 6,693,692) and further in view of

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Uchiyama et al. (Recent Progress in Optical Retardation Films for FPDs, pages 493-496).

Claim 9 is rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kume et al in view of Kaneko et al.

Applicants respectfully submit that the present invention is not anticipated by or obvious over the disclosures of Kume et al et al, either alone or in combination with Sakamoto et al, Aida et al, Kuwabara et al, Kaneko et al or Uchiyama et al, and request that the Examiner reconsider and withdraw this rejection in view of the following remarks.

1. **Claim 1**

a. **35 U.S.C. 102**

In Kume et al does not teach or disclose

- ① the birefringent B-layer is formed of a polymer exhibiting positive birefringence (prior pending claim 5) or
- ② in-plane retardation of the birefringent optical film has reciprocal wavelength dispersion characteristics (prior pending claim 8).

The Examiner did not reject prior pending claims 5 or 8 based on Kume et al. Therefore, the rejection under 35 U.S.C. 102 (e) based on Kume et al is moot.

b. **35 U.S.C. 103**

With respect to the above mentioned ① (the birefringent B-layer is formed of a polymer exhibiting positive birefringence), the Examiner states that Aida et al discloses that the

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birefringent A-layer (second retardation film having a negative intrinsic birefringence value) and the birefringent B-layer (first retardation film having a positive intrinsic birefringence value) of the present application and, therefore, asserts that it would have been obvious to apply these birefringent layers to the birefringent optical film of Kume et al. (Page 5 of the Office Action).

However, the positiveness and negativeness of intrinsic birefringence value does not correspond to refractive index distribution. In other words, "first retardation film having a positive intrinsic birefringence value" of Aida et al does not always show predetermined refractive index distribution (e.g.  $n_a = n_b > n_c$  of Kume et al and  $n_{x_b} \geq n_{y_b} > n_{z_b}$  of the present invention). Accordingly, it is not obvious to apply the birefringent layers of Aida et al to the birefringent optical film of Kume et al. Even if Aida et al mentions about the effect to decrease viewing angle dependence by a combination of above mentioned first and second retardation film, it would be improper hindsight to apply retardation film of Aida et al. to the birefringent layers of Kume et al based on this ground.

Furthermore, with respect to the above mentioned ② (in-plane retardation of the birefringent optical film has reciprocal wavelength dispersion characteristics), the Examiner points out that Kaneko et al describes that the wide-band quarter wave film is formed by two retardation films (18, 19) and Uchiyama et al describes reciprocal wavelength dispersion in wide-band quarter wave film, and therefore asserts that it would have been obvious to apply them to the birefringent optical film of Kume et al. (Page 8 of the Office Action).

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However, with respect to the retardation film of Kaneko et al and Uchiyama et al, a refractive index distribution is not described at all. Even if the optical film of these references has reciprocal dispersion characteristics, neither of these references suggest nor describe that it has the similar characteristics with the retardation film of Kume et al having specific refractive index distribution. Accordingly, the present invention is not obvious.

Moreover, according to the amendment of above mentioned ①, the birefringent B-layer of the present invention is formed of the polymer materials exhibiting positive birefringence. None of the cited art suggest nor describe that the optical film including a birefringent layer formed by such predetermined birefringence materials has reciprocal wavelength dispersion characteristics. Accordingly, the present invention is not obvious.

Furthermore, the retardation film of Kaneko et al and Uchiyama et al is wide-band quarter wave film. That is, they are aimed to convert circularly polarized light to linearly polarized light (and vice versa). Unlike the birefringent optical film of the present invention, they are not aimed for, for example, compensation and colouring prevention of birefringent of liquid crystal cell and others. In other words, the birefringent optical film of the present invention is not obvious from Kume et al and Kaneko et al or Kume et al and Uchiyama et al since it is clearly different from the retardation film of Kaneko et al and Uchiyama et al in view of its object and effect. Moreover, the birefringent optical film of the present invention unexpectedly achieves an advantageous effect in that the occurrence of display colouring can further be prevented by having reciprocal wavelength dispersion characteristics. See the paragraph [0099] of Applicants'

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Specification (page 23, line 25 to 29). Such an excellent effect is neither described nor suggested in Kaneko et al, Uchiyama et al as well as any other references cited in the instant rejections.

## 2. The Dependent Claims

All claims after claim 1 are dependant on claim 1. Accordingly, they cannot be rejected under 35 U.S.C. 102 (e) and 103(a) for at least the same reasons as set forth above. With respect to claim 3, 4, 6, 9, and 16 to 20, Applicants also note the following.

### a. Claims 3, 4, 6, and 16

The Examiner alleges that Aida et al discloses that the birefringent A-layer (second retardation film having a negative intrinsic birefringence value) and the birefringent B-layer (first retardation film having a positive intrinsic birefringence value) of the present application and that Kuwabara et al discloses mixture of the polymer exhibiting negative birefringence and the polymer exhibiting positive birefringence and, therefore, asserts that it would have been obvious to apply these to the birefringent layers of Kume et al. (Page 5 to 8 of the Office Action).

However, as described above in our comments in Section 1 above with respect to claim 1, the positiveness and negativeness of intrinsic birefringence value does not correspond to refractive index distribution. Accordingly, one of ordinary skill in the art would not say that the present invention is obvious by applying the first and second retardation film of Aida et al and the birefringent layers of Kuwabara et al to the birefringent layers of Kume et al.

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**b. Claim 9**

The Examiner makes a calculation based on Figure 16 and other figures of Kaneko et al and asserts that the present invention is obvious from Kurne et al in combination with Kaneko et al. (Page 9 of Office Action). The Examiner sees curve 32 corresponding to the birefringent A-layer and curve 31 corresponding to the birefringent B-layer. However, as described above in the comments in Section 1 above with respect to claim 1, the positiveness and negativeness of intrinsic birefringence value does not correspond to refractive index distribution. Moreover, with respect to the retardation film of Kaneko et al, a refractive index distribution is not described at all. Accordingly, Applicants respectfully traverse the Examiner's conclusions of correspondence to the birefringent layers of the present invention, based on the Examiner's calculations based on the curves of the cited art.

**c. Claim 17**

While Applicants respectfully submit that dependent claim 17 is allowable for the same reasons as independent claim 1, Applicants further note that claim 17 recites that the birefringent B-layer is formed by at least one polymer selected from the group consisting of polyamide, polyimide, polyetherketone, polyaryletherketone, polyamide imide and polyesterimide and that the thickness of the birefringent B-layer less than to 0.1 to 30  $\mu\text{m}$ . The invention of claim 17 provides a further excellent effect. In addition, claim 17 does not recite the polyester disclosed in Aida et al.

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**d. Claim 18**

Examples of the present application prove that the birefringent optical film of the present invention shows an unexpected and excellent effect especially in a use as viewing-angle compensating films for VA mode liquid crystal displays.

**e. Claim 19**

Examples of the present application prove that the birefringent optical film of the present invention shows an unexpected and excellent effect especially by the birefringent A-layer having a property satisfying  $ny_a > nz_a > nx_a$ .

**f. Claim 20**

Examples of the present application prove that the birefringent optical film of the present invention shows an unexpected and excellent effect especially by the birefringent B-layer having a property satisfying  $nx_b > ny_b > nz_b$ .

For the above reasons, it is respectfully submitted that the subject matter of claims 1-4, 6, 7 and 9-20 is neither taught by nor made obvious from the disclosures of Kume et al et al, either alone or in combination with Sakamoto et al, Aida et al, Kuwabara et al, Kaneko et al and/or Uchiyama et al, and it is requested that the rejection under 35 U.S.C. §103(a) be reconsidered and withdrawn.

**II. Conclusion**

In view of the above, Applicants respectfully submit that their claimed invention is allowable and ask that the rejection under 35 U.S.C. §102 and the rejections under 35 U.S.C.

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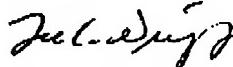
§103 be reconsidered and withdrawn. Applicants respectfully submit that this case is in condition for allowance and allowance is respectfully solicited.

If any points remain at issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the local exchange number listed below.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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**CERTIFICATE OF FACSIMILE TRANSMISSION**

I hereby certify that the attached Amendment under 37 C.F.R. §1.111 (15p) is being formally transmitted via the USPTO Central Fax No.571-273-8300 on June 19, 2007.



Lee C. Wright  
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